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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,170

01/26/2004

Takashi Okazaki

040019

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7590

06/28/2006

ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP
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EXAMINER

CHEN, VIVIAN

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicant(s)

10/763,170

Applicant(s)

OKAZAKI ET AL.

Examiner

Vivian Chen

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1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-8 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1 and 5-8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 2-4, 9 have been cancelled by Applicant.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/30/2006 has been entered.

Claim Rejections - 35 USC § 103

3. Claims 1, 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over:
MAJUMDAR ET AL (US 6,514,660);
in view of AYLRWARD ET AL (US 6,017,686) or AYLRWARD ET AL (US 5,888,643);
and in view of ASAKA ET AL (US 5,437,913) and SHIKANO ET AL (US 2003/0104180) and SAKAMOTO ET AL (US 4,880,703).

MAJUMDAR ET AL discloses a sheet material suitable for electrophotographic applications, wherein the sheet comprises a base sheet material and an image-receiving coating, wherein the base sheet material may be a coated paper substrate (e.g., those disclosed in U.S. Patent No. 6,017,686 or 5,888,543). (line 50, col. 10 to line 68, col. 11) However, the reference does not explicitly disclose the composition of the image-receiving layer or sheet stiffness.

AYLWARD ET AL '686 and '643 disclose that it is well known in the art to use multilayered laminates comprising a pigmented polyolefin skin layer having a typical thickness of up to 85 microns on both surfaces of a synthetic paper core layer as substrates for image receptor sheets, wherein the core layer has a typical thickness up to 95 microns and the (AYLWARD ET AL '686, line 25-50, col. 4; line 59, col. 3 to line 25, col. 4) (corresponding portions of AYLWARD ET AL '643) in order to obtain useful image-bearing materials.

ASAKA ET AL discloses that it is well known in the art to apply image-receiving coatings containing conductive particles (e.g., antimony-doped tin oxide) to substrates to obtain imaging materials having a typical surface resistivities of as low as $10^9 \Omega$ in order to facilitate the transfer and adhesion of toner and improve electrophotographic image quality. (line 10-25, col. 7; line 21-35, col. 9)

SHIKANO ET AL discloses that it is well known in the art to use sheets with a Clark stiffness of 15-500 in electrophotographic imaging applications (paragraph 0087-0089) in order to facilitate sheet transport during the imaging process and avoid jamming.

SAKAMOTO ET AL discloses that it is well known in the art to use highly conductive acicular titanium dioxide particles coated with antimony-doped tin oxide as conductive particles for electrophotographic copying paper, wherein the particles having a typical length of 1-10 microns and an aspect ratio of 3 or more. (entire document, especially line 32-68, col. 2; line 39-44, col. 3)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to apply known image-receiving coatings as disclosed in ASAKA ET AL to the sheets of MAJUMDAR ET AL in order to produce electrophotographic materials with

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superior image quality. It also would have been obvious to select the sheet stiffness as disclosed in SHIKANO ET AL in order to facilitate sheet handling and transport during the electrophotographic imaging process. One of ordinary skill in the art would have incorporated effective amounts of known conductive particles as disclosed in SAKAMOTO ET AL in the image-receiving coatings as disclosed in ASAKA ET AL in order to produce electrophotographic materials with desirable electrical and mechanical properties.

Response to Arguments

4. Applicant's arguments filed 3/30/2006 and refilled 5/30/2006 have been fully considered but they are not persuasive.

(A) Applicant argues that the recited surface resistivity produces unexpected results. However, while the examples indicate that films having lower surface resistivities (e.g., on the order of $10^8 \Omega$ or less) have improved imaging performance, the showing provided by the specification are not commensurate in scope with the present claims (e.g., with respect to the recited surface resistivity range, the amount and size of conductive material, the specific composition of the thermoplastic surface layers, etc.), especially since the ASAKA ET AL discloses resistivities as low as $10^9 \Omega$, which read on the claimed range.

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Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vivian Chen whose telephone number is (571) 272-1506. The examiner can normally be reached on Monday through Thursday from 8:30 AM to 6 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

The General Information telephone number for Technology Center 1700 is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 23, 2006



Vivian Chen
Primary Examiner
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